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Annual Index 1986

Part One
SUBJECT

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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The abstract sections of the semimonthly *STAR* journals can be bound separately. Individual abstracts can be located readily by means of the page numbers given at each entry, e.g., p 1555. To assist the user in binding *STAR* Volume 24, four (4) title pages are included in the back of Part 1 of the Annual Index.

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INTRODUCTION

WHAT STAR ANNUAL INDEXES ARE

This Annual Index is an edited consolidation of the indexes to the individual issues of *Scientific and Technical Aerospace Reports (STAR)* for the calendar year 1986 (Volume 24 Numbers 1 through 24). For the convenience of the user, it is divided into two parts, each bound separately. Part I contains the Subject Index. Part II contains the Personal Author Index, Corporate Source Index, Contract Number Index, and Report/Accession Number Index. The Annual Index supersedes the semimonthly indexes previously issued during 1986.

Each entry in this index includes a group of identifying numbers in the following form: 13 p 2070 N86-22575. The first two digits (13) identify the issue in which the document was announced. The "p" and the four digits that follow (2070) refer to the page number, in the designated issue, on which the abstract of the document appears. The next group of numbers (N86-22575) is the NASA Accession Number, a unique identification number assigned by NASA to each document that was acquired, indexed, and announced in *STAR* during the year.

In addition to these identifying numbers each entry in the Subject Index contains a title or title and title extension. Each entry in the Personal Author and Corporate Source Indexes contains the title of the document.

At the beginning of each index in this cumulation, a typical listing is illustrated with each of its elements identified to assist the reader in using the different types of index entries.

HOW TO USE THE SUBJECT INDEX

Subject terms in this cumulative index are arranged alphabetically, and are supplemented with cross-references which are intended to serve as directions that will enable the user to modify, enlarge, or narrow his search in accordance with his specific interests. The subject headings have been selected from the latest revision of the *NASA Thesaurus*. Two types of cross-references are used:

1. Use (U) references direct the user to alternate headings under which material on the subject may be found. For example:

   ANNULAR JETS
   U ANNULAR FLOW
   U JET FLOW
   COLUMBIAN
   U NIOBIUM

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:

   EMISSION
   NT ELECTRON EMISSION
   NT NEUTRON EMISSION
   NT THERMAL EMISSION

Finally, a searcher should use the titles and title extensions in the index to narrow further his quest for particular items. This is because subject terms can readily refer to more than one class of document. For example:

CATHODES
Cesium plasma cathodes as sources of high intensity electron beams
Cathode material testing in electrochemical half cells

This illustrates a case where two references on different topics are listed under the same subject term.

HOW TO USE THE PERSONAL AUTHOR INDEX

All personal authors identified in the abstract-section citations in the individual *STAR* issues appear in this index. Differences in transliteration schemes may require multiple searching of the index for variants of an author's name. For example:

EMELIANOV, M. D.
YEMELYANOV, M. D.

HOW TO USE THE CORPORATE SOURCE INDEX

The corporate source index entries are abridged versions of the corporate sources used in the abstract-section citations in the individual issue supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

PRINCETON UNIV., N.J. DEPT. OF CHEMICAL ENGINEERING.
(Corporate source at citation)
PRINCETON UNIV., N.J.
(Corporate source index entry)

HOW TO USE THE CONTRACT NUMBER INDEX

All contract numbers that are identified in the abstract-section citations in the individual *STAR* issues appear in this index. Changes by agencies in the style in which contract numbers are presented may require multiple searching for variants. For example:

AF 33(615)-67-C-1758
F33615-67-C-1758

HOW TO USE THE REPORT/ACCESSION NUMBER INDEX

All report numbers that have been assigned by the corporate source, monitoring activity, or cataloging activity appear in this index. Variations in initial input may result in different report number series. For example:

TP-924
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AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in the *STAR* issues covered in this index is found in the Introduction to the most currently issued semimonthly issue.

PUBLIC COLLECTIONS OF NASA DOCUMENTS

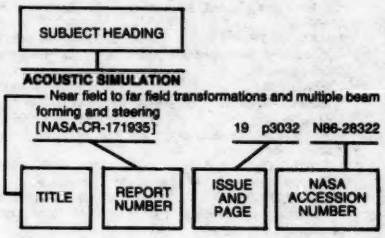
DOMESTIC: NASA and NASA-sponsored documents and a large number of aerospace publications are available to the public for reference purposes at the library maintained by the American Institute of Aeronautics and Astronautics, Technical Information Service, 555 West 57th Street, 12th Floor, New York, New York 10019.

EUROPEAN: An extensive collection of NASA and NASA-sponsored publications is maintained by the British Library Lending Division, Boston Spa, Wetherby, Yorkshire, England for public access. The British Library Lending Division also has available many of the non-NASA publications cited in *STAR*. European requesters may purchase facsimile copy or microfiche of NASA and NASA-sponsored documents, those identified by both the symbols # and * from ESA — Information Retrieval Service European Space Agency, 8-10 rue Mario-Nikis, 75738 CEDEX 15, France.

FEDERAL DEPOSITORY LIBRARY PROGRAM

In order to provide the general public with greater access to U.S. Government publications, Congress established the Federal Depository Library Program under the Government Printing Office (GPO), with 50 regional depositories responsible for permanent retention of material, inter-library loan, and reference services. Over 1,300 other depositories also exists. A list of the regional GPO libraries appears on the inside back cover.

Typical Subject Index Listing



The subject heading is the key to the subject content of the document. Titles, issues, page numbers, report numbers, and accession numbers of pertinent documents are provided under each subject heading. When the title is insufficiently descriptive of the document content, a title extension has been added, separated by three hyphens. The report number helps to indicate the type of document cited (e.g., NASA report, translation, NASA contractor report). The issue and page identify the *STAR* issue in which the document was announced and the page number on which the citation appears. The accession number denotes the number by which the citation is identified on that page. The titles are arranged under each subject heading in ascending accession number order. The subject headings have been selected from the latest revision of the *NASA Thesaurus* (NASA SP-7063).

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FABRY-PEROT LASERS
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NT CHLORINE FLUORIDES
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NT AMIDES
NT AMMONIA
NT AMMONIUM NITRATES
NT AMMONIUM PICRATES
NT ATROPINE
NT AZIDES (ORGANIC)
NT AZO COMPOUNDS
NT BISMALEIMIDE
NT BORON NITRIDES
NT CARBAMIDES
NT CELLULOSE NITRATE
NT DINITRATES
NT HYDROCYANIC ACID
NT IMIDES
NT IMINES
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NT NITRIC ACID
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NT NITRIDES
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NT NITROGEN DIOXIDE
NT NITROGEN FLUORIDES
NT NITROGEN HYDRIDES
NT NITROGEN OXIDES
NT NITROGEN POLYMERS
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NT CALCIUM OXIDES
NT CARBON DIOXIDE
NT CARBON MONOXIDE
NT CHROMIUM OXIDES
NT COPPER OXIDES
NT DIOXIDES
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NT HEMATITE
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NT CERIUM
NT CERIUM ISOTOPES
NT DYSPROSIUM ISOTOPES
NT ERBIUM
NT EUROPIUM
NT GADOLINIUM
NT HOLMIUM
NT HOLMIUM ISOTOPES
NT LANTHANUM
NT LUTETIUM
NT LUTETIUM ISOTOPES
NT NEODYMIUM
NT PRASEODYMIUM
NT PROMETHIUM ISOTOPES
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NT ARGON ISOTOPES
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NT HELIUM ATOMS
NT HELIUM FILM
NT HELIUM ISOTOPES
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NT LIQUID HELIUM
NT LIQUID HELIUM 2
NT NEON
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RASERS
U MASERS

RATE METERS
U MEASURING INSTRUMENTS

RATES (PER TIME)
NT ACCELERATION (PHYSICS)
NT ACOUSTIC VELOCITY
NT AIRSPEED
NT ANGULAR ACCELERATION
NT ANGULAR VELOCITY
NT ARRHYTHMIA
NT BIT ERROR RATE
NT BRADYCARDIA
NT BURNING RATE
NT COLLISION PARAMETERS
NT COLLISION RATES
NT CRITICAL VELOCITY

NT CURRENT DENSITY
NT DECAY RATES
NT DECELERATION
NT DRIFT RATE
NT ELECTRON ACCELERATION
NT ELECTRON DECAY RATE
NT ELECTRON FLUX DENSITY
NT ESCAPE VELOCITY
NT EVAPORATION RATE
NT EXHAUST VELOCITY
NT FLOW VELOCITY
NT FLUX (RATE)
NT FLUX DENSITY
NT GROUND SPEED
NT GROUP VELOCITY
NT HEART RATE
NT HEAT FLUX
NT HIGH ACCELERATION
NT HIGH GRAVITY ENVIRONMENTS
NT HIGH SPEED
NT HYPERSONIC SPEED
NT ILLUMINANCE
NT IMPACT ACCELERATION
NT ION PRODUCTION RATES
NT IRRADIANCE
NT LIGHT SPEED
NT LOADING RATE
NT LOW SPEED
NT LUMINANCE
NT LUMINOUS INTENSITY
NT MAGNETIC FLUX
NT MASS FLOW RATE
NT PARTICLE ACCELERATION
NT PARTICLE FLUX DENSITY
NT PHASE VELOCITY
NT PHOTON DENSITY
NT PHYSIOLOGICAL ACCELERATION
NT PLASMA ACCELERATION
NT PROPAGATION VELOCITY
NT PROTON FLUX DENSITY
NT PULSE RATE
NT PULSE REPETITION RATE
NT RADIAL VELOCITY
NT RADIANCE
NT RADIANT FLUX DENSITY
NT RECOMBINATION COEFFICIENT
NT RELATIVISTIC VELOCITY
NT RESPIRATORY RATE
NT ROTOR SPEED
NT SOLAR CONSTANT
NT SOLAR FLUX
NT SOLAR FLUX DENSITY
NT SOLAR WIND VELOCITY
NT SOUND INTENSITY
NT SPIN REDUCTION
NT STRAIN RATE
NT SUBSONIC SPEED
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NT HIGH ASPECT RATIO
NT HIGH REYNOLDS NUMBER
NT INDEXES (RATIOS)
NT LEWIS NUMBERS
NT LIFT DRAG RATIO
NT LOW ASPECT RATIO
NT LOW REYNOLDS NUMBER
NT MACH NUMBER
NT MASS RATIOS
NT MASS TO LIGHT RATIOS
NT PAYLOAD MASS RATIO
NT POISSON RATIO
NT PRANDTL NUMBER
NT PRESSURE RATIO
NT RAYLEIGH NUMBER
NT REYNOLDS NUMBER
NT RICHARDSON NUMBER
NT SCHMIDT NUMBER
NT SIGNAL TO NOISE RATIOS
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NT ORGANIC SILICON COMPOUNDS
NT QUARTZ
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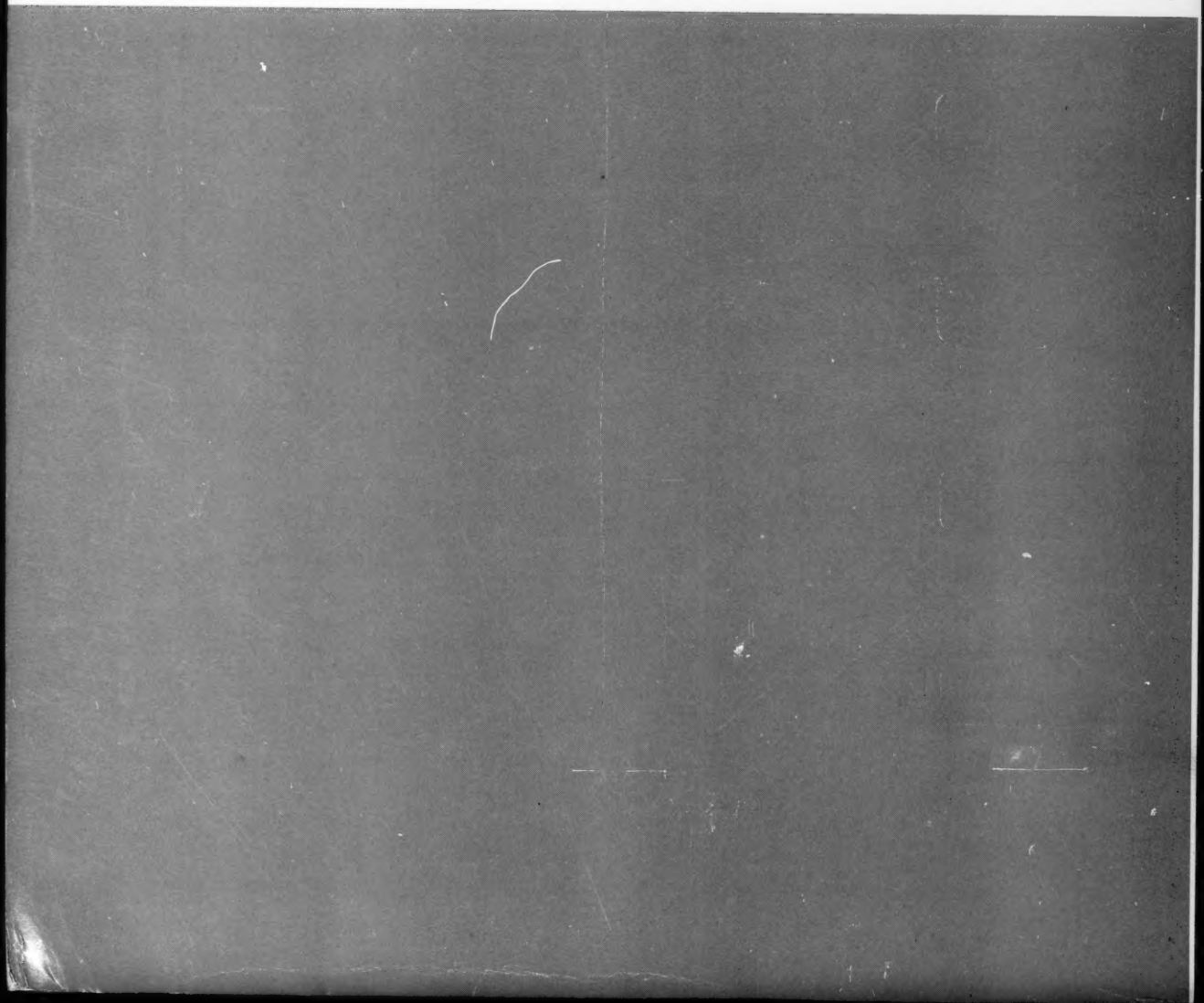
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